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1 1. A method for producing an RNA-loaded antigen  
2 presenting cell (APC), said method comprising:  
3 introducing into an antigen-presenting cell *in vitro*  
4 RNA selected from the group consisting of  
5 (i) tumor-derived RNA comprising tumor-specific RNA  
6 and  
7 (ii) pathogen-derived RNA comprising pathogen-  
8 specific RNA, thereby producing an RNA-loaded APC.

1 2. The method of claim 1, wherein said APC is a  
2 dendritic cell.

1 3. The method of claim 1, wherein said APC is a  
2 macrophage.

1 4. The method of claim 1, wherein said APC is an  
2 endothelial cell.

1 5. The method of claim 1, wherein said APC is an  
2 artificially generated APC.

1 6. The method of claim 1, wherein said RNA is  
2 tumor-derived RNA that comprises poly A<sup>+</sup> RNA.

1 7. The method of claim 1, wherein said RNA is  
2 tumor-derived RNA that comprises cytoplasmic RNA.

1           8.    The method of claim 1, wherein said RNA  
2 corresponds to a tumor antigen.

1           9.    The method of claim 1, wherein said RNA  
2 corresponds to a pathogen antigen.

1           10.   The method of claim 1, wherein said RNA  
2 corresponds to an epitope.

1           11.   The method of claim 1, wherein said RNA is  
2 tumor-specific RNA.

1           12.   The method of claim 1, wherein the RNA is  
2 introduced into the APC by contacting the APC with the RNA  
3 in the presence of a cationic lipid.

1           13.   The method of claim 1, wherein said RNA is  
2 tumor-derived RNA that is provided as a fractionated tumor  
3 extract that is fractionated with respect to a non-RNA  
4 component of the tumor.

1           14.   An RNA-loaded APC produced by the method of  
2 claim 1.

1           15.   A method for treating or preventing tumor  
2 formation in a patient, said method comprising  
3           administering to the patient a therapeutically  
4 effective amount of the RNA-loaded APC of claim 14, wherein  
5 tumor-derived RNA is introduced into said APC.

1           16. The method of claim 15, wherein the tumor-  
2 derived RNA is derived from said patient.

1           17. The method of claim 15, wherein the tumor-  
2 derived RNA is derived from a donor patient.

1           18. A method for treating or preventing a pathogen  
2 infection in a patient, said method comprising  
3 administering to the patient a therapeutically  
4 effective amount of the RNA-loaded APC of claim 14, wherein  
5 pathogen-derived RNA is introduced into said APC.

1           19. A method for producing a cytotoxic T lymphocyte  
2 (CTL), said method comprising:  
3 providing a T lymphocyte;  
4 contacting said T lymphocyte *in vitro* with the RNA-  
5 loaded APC of claim 14; and  
6 maintaining said T lymphocyte under conditions  
7 conducive to CTL proliferation, thereby producing a CTL.

1           20. A CTL produced by according to the method of  
2 claim 19.

1           21. A method for treating or preventing tumor  
2 formation in a patient, said method comprising administering  
3 to the patient a therapeutically effective amount of the CTL  
4 of claim 20, wherein said APC is loaded with tumor-derived  
5 RNA.



1           30. The method of claim 1, wherein said pathogen-  
2       derived RNA is derived from a virus.

1           31. The method of claim 30, wherein said virus is  
2       selected from the group consisting of Hepatitis viruses,  
3       human immunodeficiency viruses, influenza viruses,  
4       poliomyelitis viruses, measles viruses, herpes viruses,  
5       mumps viruses, and rubella viruses.

1           32. The method of claim 1, wherein said pathogen-  
2       derived RNA is derived from a bacterium.

1           33. The method of claim 32, wherein said bacterium  
2       is selected from the group consisting of *Salmonella*,  
3       *Shigella*, and *Enterobacter*.

1           34. The method of claim 1, wherein said pathogen-  
2       derived RNA is derived from an intracellular pathogen.

1           35. The method of claim 1, wherein said RNA is  
2       isolated from a cell.

1           36. The method of claim 1, wherein said RNA is  
2       prepared by PCR amplification and *in vitro* transcription.

1           37. The method of claim 1, wherein said RNA is  
2       tumor-derived RNA that comprises nuclear RNA.

- 1           38. The method of claim 1 wherein said RNA
- 2 corresponds to a minigene.

*Aug 1987*  
B3 *[Signature]*

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